Lesson Plan for Inquiry 4

Before beginning Inquiry 4, have students read "Thinking About the Environment" and "Thinking About Science" if they have not yet done so. This will give students an introduction to the importance of global forests and to FAO's effort to understand the world's forests.

Need: Journal, pencils, paper.

Have students read the first sentence under "The Situation". Have them read the definition of sustainable. Hold a class discussion about what sustainability means. Some ideas you can use include:

1. Have students brainstorm words, phrases, or concepts that mean sustainability to them. This could be things like regular meals, going to school, being a member of a family, etc.
2. Now challenge students to think about environmental sustainability. What does environmental sustainability mean to them?
3. Have students review the definition of criteria. Make certain students understand what criteria means before continuing.
4. Examine Figure 27. Have students guess what each of these terms might mean.

Now have students read the paragraph following Figure 27. Discuss the term "indicator" with them. In small groups, have students identify 3 criteria and two indicators for each criteria. The criteria can be something from their own life. Examples of criteria might include maturity, human intelligence, good farming weather, etc. For each of the criteria identified, ask students to identify 2 indicators that can be measured. Measurable indicators are ones to which you can apply a specific number and a unit of measurement.

Before continuing, make certain students understand what criteria and indicators are.

Have students examine Table 2 (page 22) and answer the reflection question. Then, ask students if any of the indicators are not measurable. Ask students to think about whether FAO researchers could determine how sustainable the world's forest management is today if the indicators were not measurable. Hold a discussion about measurement in science. Although most science is based on measurement, not all scientific studies use measured evidence. At the scale of the planet, or even regionally and subregionally, however, it would be difficult to determine sustainability without consistent measurement.

Have students break into 6 small groups. Assign one of the next 6 paragraphs to each group. Each of these paragraphs describes in more detail one of the FAO's criteria for sustainability. Each group will read and discuss their paragraph, then explain the criteria to the class. The first paragraph begins with "You learned about the extent..." The last of the six paragraphs begins with "Forests also provide financial..." As an extension, students may use the internet or library to do additional research about their criteria. For the criterion on forest health, note that not all forest fires are negative. Some forest types, for example, depend on occasional fire to remain healthy. Emphasize that this criterion is focused on threats to forest health, not on all forest fires.

Read the next paragraph ("Using these 6 criteria..."). Ask students if they agree with the FAO's criteria for sustainable forest management. Ask students to contribute any additional criteria for sustainable forest management.

Have students complete the reflection question on page 24. You may do this as a class, or use the six small groups from the

previous exercise. If there are no forests nearby, select a forest type with familiar characteristics.

Have students read the first paragraph after What They Discovered. Students should refer to Table 3 on page 24. Ask students if, based on what they have read so far, they are surprised that scientists found both positive and negative trends across the world. Why or why not?

Read the next paragraph. Hold a class discussion about rural poverty and forest sustainability.
Discuss the implications of this finding.

Have students read the remainder of the article, including an examination of Table 3. Using Table 3, have students identify their own region or subregion (if applicable). Have them look down the column at the indicators for their region or subregion. In small groups, have students develop a method to compare columns. Have each group share their assessment with the class.

Hold a discussion about forest sustainability in their region or subregion. Include the reflection questions in the discussion. Does their analysis suggest that something needs to be done? If so, discuss options for action. Are there any actions that individual students or the class can take?

EXTENSION: If the class has identified any actions that can be taken, give students time to plan and implement their action. For example, they might write letters to the government in support of reforestation. They might decide to plant trees in their community. They might start a Green Belt Movement in their community. Any action taken should be carefully considered for its practicality, keeping available resources in mind.